



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Peltz et al. Examiner: Unassigned

Application No.: 10/652,334 Group Art Unit: 1645

Filed: August 28, 2003 Docket: 1368-12 CON

(54569.8003.US02)

For: SUBFAMILY OF RNA

HELICASES WHICH ARE MODULATORS OF THE

FIDELITY OF TRANSLATION

TERMINATION AND USES

**THEREOF** 

Dated: February 12, 2004

I hereby certify this correspondence is being deposited with United States Postal Service as first class

mail, postpaid in an envelope, addressed to:

Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450

on February 12, 2004
Signature Barbara Thomas

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## INFORMATION DISCLOSURE STATEMENT

Sir:

In order to fulfill the requirements of candor and good faith set forth in 37 C.F.R. §1.56, Applicants submit herewith the following Information Disclosure Statement in accordance with the provisions of 37 C.F.R. §1.97 and §1.98.

This application is a continuation of U.S. Application No. 09/359,268, filed July 22, 1999, now U.S. Patent No. 6,630,294, which claims benefit of U.S. Provisional Application No. 60/093,685, filed July 22, 1998. Copies of the references cited in the Form PTO-1449 have

been previously submitted to the U.S. Patent and Trademark Office for the related application or have been cited in the related application. Copies of these references can be found in the priority file. Accordingly, copies of the previously submitted or cited references are not required to be submitted in the present application under 37 C.F.R. §1.98(d).

Applicants also respectfully request that a copy of the attached Form PTO-1449, initialed by the Examiner, be returned to Applicants' agent together with the next communication indicating that these documents have in fact been considered.

If the Examiner has any questions or comments relating to the present application, he or she is respectfully invited to contact Applicants' agent at the telephone number set forth below.

Respectfully submitted,

Gloria K. Szakiel

Registration No.: 45,149 Agent for Applicant(s)

HOFFMANN & BARON, LLP 6900 Jericho Turnpike Syosset, New York 11791 (973) 331-1700 FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. 1368-12 CON SERIAL NO. 10/652,334

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

APPLICANT CONFIRMATION NO. Peltz et al. 5532

(Use several sheets if necessary)

FILING DATE GROUP August 28, 2003 1645

#### U.S. PATENT PUBLICATIONS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE

#### U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	5,641,627	6/1997	Moehler			
	5,679,566	10/21/97	He et al.			
	 5,840,702	11/1998	Bedwell			
	 5,874,231	02/1999	Sonenberg et al.			
	5,994,119	11/30/99	Dietz			
	6,630,294	10/2003	Peltz et al.			

#### FOREIGN PATENT DOCUMENTS

EXAMINER	DOCUMENT DATE	COUNTRY	CLASS	SUB	TRANSLATION		
INITIAL	NUMBER	DATE	COOMING	CLASS	CLASS	YES	NO
	WO 97/12617	04/10/97	PCT				
	WO 97/34611	09/1997	PCT				
	WO 97/40855	11/1997	PCT				
	WO 99/61600	12/1999	PCT				

#### **EXAMINER**

#### DATE CONSIDERED

SERIAL NO. 10/652,334

**GROUP** 

1645

CONFIRMATION NO.

TRADE TO TRA	ATTY. DOCKET NO. 1368-12 CON	SERIA 10/652
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	APPLICANT Peltz et al.	CONFI 5532

(Use several sheets if necessary)

OT	HER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
	Frolova et al; Eukaryotic polypeptide chain release factor eRF3 is an eRF1-and ribosome-dependent gaunosine triphosphatase RNA; 1996; 2:334-341
	Audrey L. Atkin et al; Relationship between Yeast Polyribosomes and Upf Proteins Required for nonsense mRNA Decay; The Journal of Biological Chemistry; Vol. 272, No. 35; Issue of August 29, pp. 22163-22172
	Howard et al.; Aminoglycoside Antibiotics restore CFTR function by overcoming premature stop mutations; Nature Medicine; Vol 2, April 1996; pp 467-469
	Branch; TIBS; 23:45-50 (February 1998); (published after filing of parent application)
	Czaplinski et al; RNA; 1:610-623 (1995).
	Czaplinski et al; Bioessays; 21:685-696 (1999)
	Czaplinski et al.; Genes & Development; 12:1665-1677; (June 1998) (published after filing of parent application)
	Andjelkovich et al.; Medline Abstract 2191; EMBOJ. 15:7156-7167 (1996)
	Peltz; et al; Progress in Nucleic Acid Research and Molecular Biology; 47:271-298 (1994)
	Weng et al; Molecular and Cellular Biology; 16:5477 (1996)
	Biswas et al; Biochem and Biophys Research Communications; 206;850-856 (1995)
	Applequist et al; Cloning and characterization of HUPF1, a human homolog of the Saccharomyces cerevisiae nonsense mRNA-reducing UPF1 protein; pp 814-821; Nucleic Acids Research; 1997; Vol 25, No. 4
	Broun et al., Science 282:1315-1317, 1998.
	Van de Loo et al., Proc. Natl. Acad. Sci. 92:6743-6747, 1995.
	Bork, Genome Research, 10:398-400, 2000.

FILING DATE

August 28, 2003

## **EXAMINER**

## DATE CONSIDERED

		<del></del>		
	DEPARTMENT OF COMMERCE AND TRADEMARK OFFICE	ATTY. DOCKET NO. 1368-12 CON	SERIAL NO. 10/652,334	
	MATION DISCLOSURE MENT BY APPLICANT	APPLICANT Peltz et al.	CONFIRMATION NO. 5532	
(Use seve	eral sheets if necessary)	FILING DATE August 28, 2003	GROUP 1645	
	All-Robyn, J. A., Kelley-Geraghty D of omnipotent suppressors in an [eta-Altamura, N., Groudinsky, O., Dujar-encodes a novel member of a family mitochondrial functions in Saccharon	+] yeast strain. <i>Genetics</i> 124 din, G. and Slonimski, P.P. ( of helicases with a Z1-6n-lig	:505-514. 1992) NAM7 nuclear gene and motif and is involved in	
	Atkin A. L., Altamura, N. Leeds, P., UPF1 co-localizes with polyribosome			
	Bean D. W., and Matson, S. W. 1997 helicase from <i>Saccharomyces cerevis</i>	1997. Identification of the gene encoding scHell, a DNA revisiae. Yeast 13:1465-1475.		
	Bean, D. W. Kallam, W. E. and Mats DNA helicase from Saccharomyces of			
	Bedwell, DM, Kaenjak A, Benos DJ, Sorscher EJ. 1997. Suppression of a cell line. Nature Med 1997 3:1280-1	CFTR premature stop mutat		
	Biswas, E. E., Fricke, W. M., Chen, l cloning, expression, purification, and 13284.			
	Biswas, S. B., Chen, P. H., and Bisw DNA polymerase α-associated replic Biochemistry 36 13270-13276.			
	Biswas, E. E., Chen, P. H. Leszyk, J. characterization of a replication prote Saccharomyces cerevisiae. Biochem	ein A dependent DNA helica	se from the yeast,	
	Biswas, E. E., Chen, P. H. and Biswa polymerase alpha: isolation by a mod 32:13393-13398.			

## DATE CONSIDERED

	. DEPARTMENT OF COMMERCE T AND TRADEMARK OFFICE	ATTY. DOCKET NO. 1368-12 CON	SERIAL NO. 10/652,334
	RMATION DISCLOSURE EMENT BY APPLICANT	APPLICANT Peltz et al.	CONFIRMATION NO. 5532
(Use se	(Use several sheets if necessary)		GROUP 1645
	Biswas, E. E. Ewing, C. M. and I dependent ATPase and a DNA uralpha complex. Biochemistry. 2:	nwinding activity associated wi	
	Buckingham, R. Grentzmann, G. Mol. Microbiol. 24, 449-456.	, and Kisselev, L. (1997) Poly	peptide chain release factors
	Budd, M. E., Choe, W. C., and C essential for replication of eukary		
	Budd, M. E., and Campbell, J. L. yeast FEN-1 nuclease in carrying		
	Cui, Y., Hagan, K. W., Zhang S., of genes that are required for the translation termination codon. G	accelerated degradation of mR	
	Cui, Y., Dinman, J. D., and Peltz, which affects both mRNA turnov 5726-5736.		
	Czaplinski, K., Weng, Y., Hagan characterization of the Upflp: a f 1, 610-623.		
	Czaplinski, K., Ruiz-Echevarria, and Peltz, S. W. 1998. Assembly termination event. Genes & /Dev	of the mRNA surveillance con	
	DeMarini, D. J., Winey, M., Ursi- positive effector of tRNA-splicing 12:2154-2164		
	Didichenko, S. A., Ter-Avanesya bound protein of yeast Saccharon		•

## DATE CONSIDERED

EDRM PTO-1449 U.S (Rev. 2-32) PATEN	. DEPARTMENT OF COMMERCE T AND TRADEMARK OFFICE	ATTY. DOCKET NO. 1368-12 CON	SERIAL NO. 10/652,334	
	RMATION DISCLOSURE EMENT BY APPLICANT	APPLICANT Peltz et al.	CONFIRMATION NO. 5532	
(Use sev	veral sheets if necessary)	FILING DATE August 28, 2003	GROUP 1645	
	Dinman, J. D., Ruiz-Echevarria, M. treatments: Identifying compounds and function as potential antiviral	s that modulate programmed -	-1 ribosomal frameshifting	
	transferase inhibitors have antivira	M. J., Czaplinski, K. and Peltz, S. W. 1997. Peptidyl- iral properties by altering programmed –1 ribosomal elopment of model systems P.N.A.S. 94:6606-6611. ssen, H. H., Cheperegin, S., Drugeon, G., Kress, M., Armar nillippe, M. Justesen, J., and Kisselev, L. (1994) A highly nily processing properties of a polypeptide chain release vleva, G. Davydova, E., Philippe, M. and Kisselev, L.		
	I., Haenni, A. L., Celis, L. E., Phill conserved eukaryotic protein famil factor. <i>Nature</i> 372, 701-703.			
	(1996) Eukaryotic polypeptide cha guanosine triphosphatase. RNA 4,	in release factor eRF3 is an el		
	Gorbalenya AE, Koonin EV, Doch nucleoside triphosphate-binding m duplex unwinding in DNA and RN 24.	otif containing proteins which	are probably involved in	
	Hagan, K. W., Ruiz-Echevarria, M cis-acting sequences and decay into turnover. <i>Mol Cell. Biol.</i> 15, 809-6	ermediates involved in nonser		
	He, F., Brown, A. H., and Jacobson components of the yeast nonsense- 94			
	He, F. Peltz, S. W., Donahue, J. L., ribosome association of unspliced USA 90, 7034-7038.			
	Howard, M., Frazzell R. A. and Be CFTR function by overcoming pre	` /	•	

## DATE CONSIDERED

	S. DEPARTMENT OF COMMERCE NT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 1368-12 CON	SERIAL NO. 10/652,334	
	DRMATION DISCLOSURE ITEMENT BY APPLICANT	APPLICANT Peltz et al.	CONFIRMATION NO. 5532	
(Use se	everal sheets if necessary)	FILING DATE August 28, 2003	GROUP 1645	
	Jacobson, A., and Peltz, S. W. (19 translation in eukaryotic cells. As			
	Koonin, E. V. (1992). A new gro	oup of putative RNA helicases.	TIBS 17, 495-497.	
	Korolev, S. Hsieh, J., Gauss, G. F swiveling revealed by the crystal single-stranded DNA and ADP.	structures of complexes of E.	an, G. 1997. Major domain coli Rep helicase bound to	
		A. and Culbertson, M.R. (1991) The product of the yeast turnover of mRNAs containing a premature translational  S., and Culbertson, M.R. (1992) Gene products that promote ces cerevisiae. Mol. Cell. Biol. 12, 2165-2177.		
	Lussier, M. White, A-M., Sherato C. I., Chen-Weiner, J., Ram, A. F C. Hall, J., Zhong, W. W., Sdicu, H. 1997. Large Scale identificati Architecture in Saccharomyces co	F. J., Kapteyn, J. C., Roemer, T A-M., Davies, J., Klis, F. M., on of Genes Involved in Cell S	. W., Vo, D. H., Bondoc, D. Robbins, P. W., and Bussey, surface Biosynthesis and	
		stance of Francomano, C. A., Antonarakis, S. E., and Pearson, nce in man: a catalog of human genes and genetic disorders  Baltimore MD. (Web site-		
	Paushkin S. V., Kushnirov, V. V. Vitro propagation of the prion-lik			
	Paushkin S. V., Kushnirov, V. V. Interaction between yeast Sup45p factors: Implications for prior-de	o(eRF1) and Sup35p(eRF3) po	lypeptide chain release	
EXAMINER	DATE C	ONSIDERED		

- CARE				
PORM PTO-1449	U.S. DEPARTMENT OF COMMERCE FENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 1368-12 CON	SERIAL NO. 10/652,334	
	IFORMATION DISCLOSURE	APPLICANT Peltz et al.	CONFIRMATION NO. 5532	
(Use	e several sheets if necessary)	FILING DATE August 28, 2003	GROUP 1645	
		M., Spencer, F.A., Kendzior, R. J. Jr. and Dietz, H. C. (1996) ast regulator of nonsense-transcript stability. <i>Proc. Natl. Acad</i>		
	Rose, M. D., Winston, D. F. and I harbor Laboratory Press, Cold Sp.	, , ,	east Genetics. Cold Spring	
	Rosen F. Edery I. Meerovitch K, RNA helicase activity of eucaryot 10:1134-1144.			
	Ruiz-Echevarria, M. J., K. Czapli yeast. TIBS 21, 433-438.	nski, and S. W. Peltz. (1996)	Making sense of nonsense in	
	Ruiz-Echevarria, M. J., and Peltz, investigate the role of the sequence EMBO J. 15, 2810-2819.			
	Scheisti, R. H. and Geitz, R. D. (1 using single stranded nucleic acid			
	Singh, A., Ursic, D. and Davies, J Saccharomyces cerevisiae. Natur		n and misreading	
		maloka, and Tuite, M. F. (1992) Ribosomal association of the ct: implications for its role in translation fidelity and 3469-3478.		
	Song J. M. and Liebman S. W. 19 omnipotent suppressors in Saccha		•	
	Stansfield, I., Jones, K. M., Kushr Paushkin, S. V., Nierras, C. R., Co The products of the SUP45(eRF1) termination in Saccharomyces cer	ox, B. S., Ter-Avanesyan, M. l ) and SUP35 genes interact to	D. and Tuite, M. F. (1995) mediate translation	

## **DATE CONSIDERED**

		Sheet 8 c	
S. DEPARTMENT OF COMMERCE NT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 1368-12 CON	SERIAL NO. 10/652,334	
DRMATION DISCLOSURE ATEMENT BY APPLICANT	APPLICANT Peltz et al.	CONFIRMATION NO. 5532	
everal sheets if necessary)	FILING DATE August 28, 2003	GROUP 1645	
Dexx box DNA helicases. Natur	e 384-379-383.		
mutations in the UPF1 gene that a	affect nonsense suppression and	d the formation of the Upf	
S. W. (1997) Characterization of on modulating translation termina	the nonsense-mediated mRNA ation and programmed framesh	decay pathway and its effect ifting. In: mRNA Metabolism	
· · ·	•	tRNA-splicing endonuclease	
Zhouravleva, G. Frolova, L., LeG and Phillippe, M. (1995) Termina	Goff, X., LeGuellec, R., Inge-Vertion of translation in eukaryote	es is governed by two	
	Subramanya, H. S., Bird, L. E., E Dexx box DNA helicases. Natur  Venkatesan M, Silver LL, Nossal synthesis of RNA primers, is also  Weng, Y., Czaplinski, K. and Pel of mutations in the ATPase and h 5490.  Weng, Y., Czaplinski, K. and Pel mutations in the UPF1 gene that protein complex, but not mRNA  Weng, Y., Czaplinski, K. and Pel modulates it translation terminati  Weng, Y., Ruiz-Echevarria, M. J S. W. (1997) Characterization of on modulating translation termina and Post-transcriptional Gene Re  Winey, M. and M. R. Culbertson activity of Saccharomyces cerevi. Zhouravleva, G. Frolova, L., LeC and Phillippe, M. (1995) Termina	DRMATION DISCLOSURE APPLICANT Peltz et al.  FILING DATE August 28, 2003  Subramanya, H. S., Bird, L. E., Brannigan, J. A. and Wigley, D. Dexx box DNA helicases. Nature 384-379-383.  Venkatesan M, Silver LL, Nossal NG. 1982. Bacetriophage T4 synthesis of RNA primers, is also a DNA helicase. J Biol Chem  Weng, Y., Czaplinski, K. and Peltz, S. W. (1996a) Genetics and of mutations in the ATPase and helicase regions of UPF1 Protei	

## DATE CONSIDERED